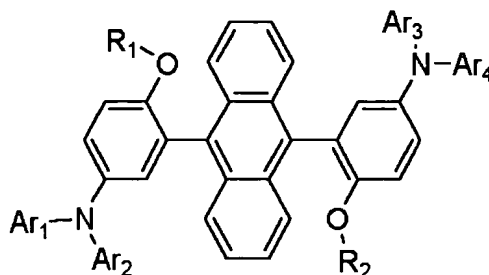


What is claimed is:

1. A diphenyl anthracene derivative represented by formula 1:

<Formula 1>

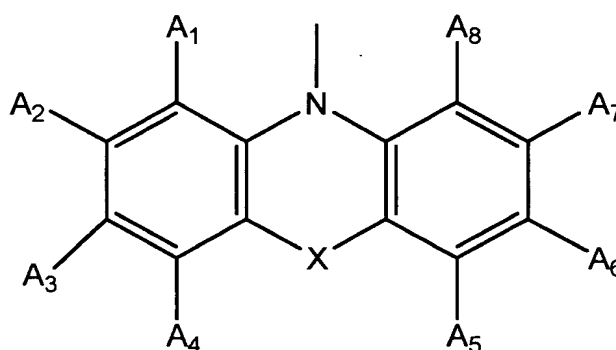


wherein R_1 and R_2 are independently a hydrogen atom; a C_{1-20} linear or branched alkyl group; a C_{5-20} cycloalkyl group; a C_{6-20} aryl group; a C_{4-20} heteroaryl group; or a C_{6-20} aryl group having at least one substituent selected from the group consisting of a halogen atom, a C_{1-10} halogenated alkyl group, $-Si(R)(R')(R'')$, a C_{1-10} alkyl group, a C_{1-10} alkoxy group, a C_{6-10} aryl group, a C_{4-10} heteroaryl group and $-N(R)(R')$,

Ar_1 , Ar_2 , Ar_3 and Ar_4 are independently a hydrogen atom; a C_{1-20} linear or branched alkyl group; a C_{5-20} cycloalkyl group; a C_{6-20} aryl group; a C_{4-20} heteroaryl group; or a C_{6-20} aryl group having at least one substituent group selected from the group consisting of a halogen atom, a C_{1-10} halogenated alkyl group, $-Si(R)(R')(R'')$, a C_{1-10} alkyl group, a C_{1-10} alkoxy group, a C_{6-10} aryl group, a C_{4-10} heteroaryl group and $-N(R)(R')$, where at least one selected from the group consisting of Ar_1 and Ar_2 , and Ar_3 and Ar_4 can be interconnected, respectively, and R , R' and R'' are independently selected from the group consisting of a hydrogen atom, a C_{1-10} alkyl group, a C_{1-10} alkoxy group, a C_{6-10} aryl group and a C_{4-10} heteroaryl group.

2. The diphenyl anthracene derivative as claimed in claim 1, wherein in formula 1, $-N(Ar_1)(Ar_2)$ and $-N(Ar_3)(Ar_4)$ are independently a group represented by formula 2:

<Formula 2>



wherein X is $-(CH_2)_n-$, where n is an integer of 0 ~ 2, $-C(R_3)(R_4)-$, $-CH=CH-$, $-S-$, $-O-$ or $-Si(R_3)(R_4)-$,

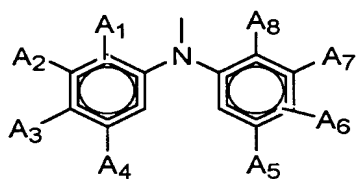
A_1 , A_2 , A_3 , A_4 , A_5 , A_6 , A_7 , A_8 , R_3 , and R_4 are independently a hydrogen atom; a C_{1-20} linear or branched alkyl group; a C_{5-20} cycloalkyl group; a C_{6-20} aryl group; a C_{4-20} heteroaryl group; or a C_{6-20} aryl group having at least one substituent selected from the group consisting of a halogen atom, a C_{1-10} halogenated alkyl group, $-Si(R)(R')(R'')$, a C_{1-10} alkyl group, a C_{1-10} alkoxy group, a C_{6-10} aryl group, a C_{4-10} heteroaryl group and $-N(R)(R')$,

at least one selected from the group consisting of A_1 and A_2 , A_2 and A_3 , A_3 and A_4 , A_5 and A_6 , A_6 and A_7 , and A_7 and A_8 can be interconnected, respectively, and

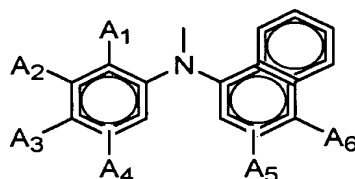
R , R' and R'' are independently selected from the group consisting of a

hydrogen atom, a C₁₋₁₀ alkyl group, a C₁₋₁₀ alkoxy group, a C₆₋₁₀ aryl group and a C₄₋₁₀ heteroaryl group.

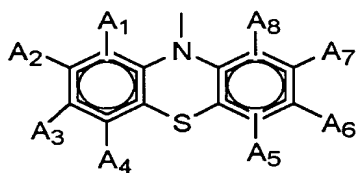
3. The diphenyl anthracene derivative as claimed in claim 2, wherein the group represented by formula 2 is at least one selected from the group consisting of groups (2a)-(2h):



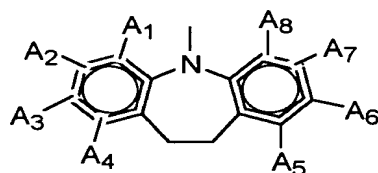
(2a)



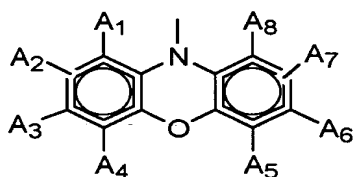
(2b)



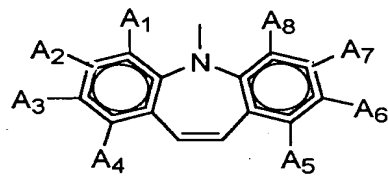
(2c)



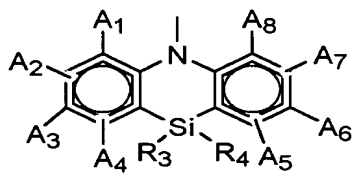
(2d)



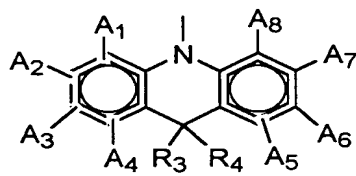
(2e)



(2f)



(2g)



(2h)

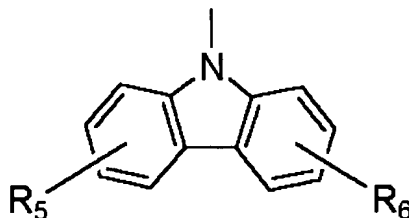
wherein A_1 , A_2 , A_3 , A_4 , A_5 , A_6 , A_7 , A_8 , R_3 and R_4 are independently a hydrogen atom; a C_{1-20} linear or branched alkyl group; a C_{5-20} cycloalkyl group; a C_{6-20} aryl group; a C_{4-20} heteroaryl group; or a C_{6-20} aryl group having at least one substituent selected from the group consisting of a halogen atom, a C_{1-10} halogenated alkyl group, $-\text{Si}(\text{R})(\text{R}')(\text{R}'')$, a C_{1-10} alkyl group, a C_{1-10} alkoxy group, a C_{6-10} aryl group, a C_{4-10} heteroaryl group and $-\text{N}(\text{R})(\text{R}')$,

at least one selected from the group consisting of A_1 and A_2 , A_2 and A_3 , A_3 and A_4 , A_5 and A_6 , A_6 and A_7 , and A_7 and A_8 can be interconnected, respectively, and

R , R' and R'' are independently selected from the group consisting of a hydrogen atom, a C_{1-10} alkyl group, a C_{1-10} alkoxy group, a C_{6-10} aryl group and a C_{4-10} heteroaryl group.

4. The diphenyl anthracene derivative as claimed in claim 1, wherein in formula 1, $-\text{N}(\text{Ar}_1)(\text{Ar}_2)$ and $-\text{N}(\text{Ar}_3)(\text{Ar}_4)$ are independently a group represented by formula 3:

<Formula 3>



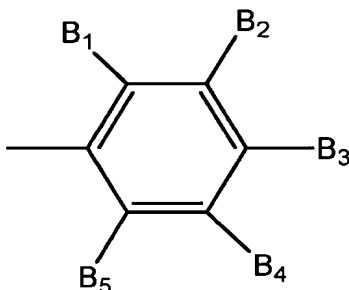
wherein R_5 and R_6 are independently a hydrogen atom; a C_{1-20} linear or branched alkyl group; a C_{5-20} cycloalkyl group; a C_{6-20} aryl group; a C_{4-20} heteroaryl group;

or a C₆₋₂₀ aryl group having at least one substituent group selected from the group consisting of a halogen atom, a C₁₋₁₀ halogenated alkyl group, -Si(R)(R')(R''), a C₁₋₁₀ alkyl group, a C₁₋₁₀ alkoxy group, a C₆₋₁₀ aryl group, a C₄₋₁₀ heteroaryl group and -N(R)(R'), and

R, R' and R'' are independently selected from the group consisting of a hydrogen atom, a C₁₋₁₀ alkyl group, a C₁₋₁₀ alkoxy group, a C₆₋₁₀ aryl group and a C₄₋₁₀ heteroaryl group.

5. The diphenyl anthracene derivative as claimed in claim 4, wherein in formula 3, R₅ and R₆ are represented by formula 4:

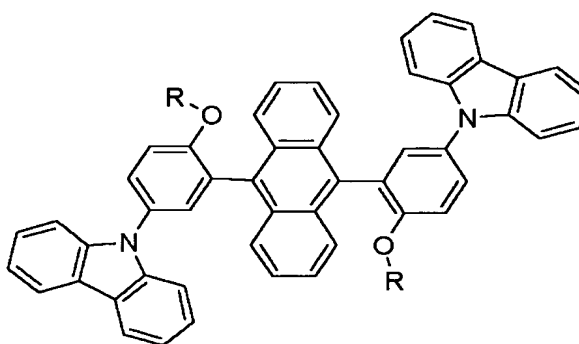
<Formula 4>



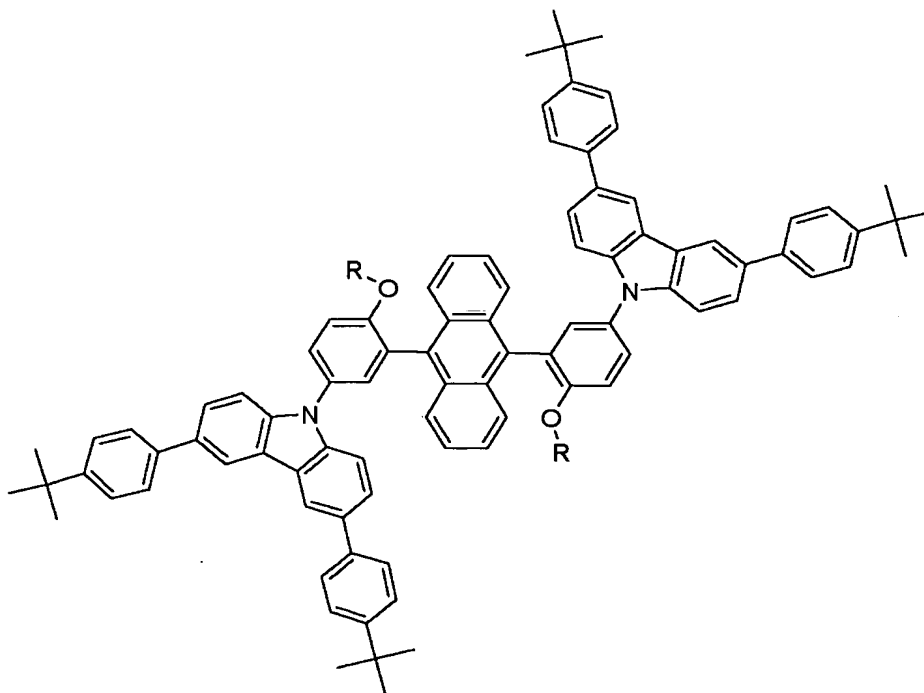
wherein B₁, B₂, B₃, B₄ and B₅ are independently a hydrogen atom; a C₁₋₂₀ linear or branched alkyl group; a C₅₋₂₀ cycloalkyl group; a C₆₋₂₀ aryl group; a C₄₋₂₀ heteroaryl group; or a C₆₋₂₀ aryl group having at least one substituent selected from the group consisting of a halogen atom, a C₁₋₁₀ halogenated alkyl group, -Si(R)(R')(R''), a C₁₋₁₀ alkyl group, a C₁₋₁₀ alkoxy group, a C₆₋₁₀ aryl group, a C₄₋₁₀ heteroaryl group and -N(R)(R'), and R, R' and R'' are independently selected from the group consisting of a hydrogen atom, a C₁₋₁₀ alkyl group, a C₁₋₁₀ alkoxy group, a C₆₋₁₀ aryl group and a C₄₋₁₀ heteroaryl group.

6. The diphenyl anthracene derivative as claimed in claim 1, wherein the compound represented by formula 1 is at least one selected from the group consisting of compounds represented by formulas 1a through 1c:

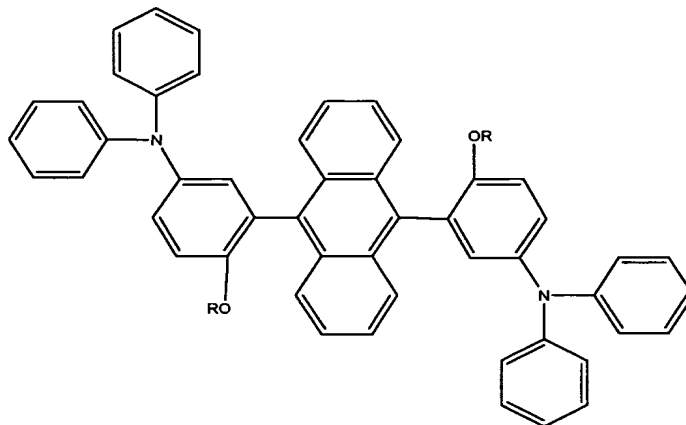
<Formula 1a>



<Formula 1b>



<Formula 1c>



wherein R is a C₁₋₂₀ linear or branched alkyl group.

7. An organic EL device comprising an organic layer positioned between a pair of electrodes, the organic layer containing the diphenyl anthracene derivative as claimed in claim 1.

8. The organic EL device as claimed in claim 7, wherein the organic layer is an emissive layer, a hole injection layer or a hole transport layer.

9. The organic EL device as claimed in claim 7, wherein the organic layer is an emissive layer, and wherein the emissive layer comprises from about 0.1 to about 99.9 % by weight of the diphenyl anthracene derivative and from about 99.9 to about 0.1 % by weight of a light-emitting material.

10. The organic EL device as claimed in claim 9, wherein the light-emitting material is at least one selected from the group consisting of polyarylenes, poly(p-phenylenes), poly(p-phenylene vinylenes), and polyfluorenes.